

CLAIMS

1. A pressure device attached to an actuator and applying pressure to an object to be pressurized, the device comprising:

a cylinder body, to one end of which an attachment of said actuator is attached and to the other end of which an insertion hole communicating with a housing chamber formed therein is provided;

a pressure rod axially reciprocably attached to said cylinder body and provided, at one end of the pressure rod, with a pressure end protruding from said insertion hole;

a reciprocating body provided at the other end of said pressure rod and having a diameter smaller than that of an inner circumferential surface of said housing chamber, which is reciprocably housed in said housing chamber; and

an advance pressure diaphragm provided between said reciprocating body and said cylinder body and partitioning and forming an advance pressure chamber for applying a pressure thrust toward said object to be pressurized.

2. The pressure device according to claim 1, comprising a weight offset pressure diaphragm provided between said reciprocating body and said cylinder body and partitioning and forming a weight offset pressure chamber for applying a weight offset thrust in a direction opposite to said pressure thrust.

3. The pressure device according to claim 2, comprising an offset load adjusting diaphragm provided between said

reciprocating body and said cylinder body, partitioning and forming said weight offset pressure chamber along with said weight offset pressure diaphragm, and blocking off the weight offset pressure chamber and an ambient-air pressure chamber.

4. The pressure device according to claim 2, wherein said reciprocating body and said pressure rod are disposed so that said pressure rod is directed vertically downwardly, and said weight offset pressure chamber is filled with compressed fluid that is set at fluid pressure capable of retaining said reciprocating body in a state in which said reciprocating body is out of contact with any of inner wall surfaces of said cylinder body.

5. The pressure device according to claim 1, wherein a dust collecting port is formed in said cylinder body.

6. The pressure device according to claim 1, comprising a gap between an outer circumferential surface of said pressure rod and an inner circumferential surface of said insertion hole.